

Amendments to the Claims:

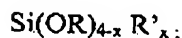
This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Currently Amended) A fluid container for containing a liquid nutrient having a pH equal to or greater than about 2.5, said container having an interior surface having a polymeric layer thereon, said polymeric layer having a metal-ion sequestering agent for removing a designated metal ion from said liquid nutrient for inhibiting growth of microbes in said liquid nutrient, said metal-ion sequestering agent comprises derivatized nanoparticles comprising inorganic nanoparticles having an attached metal-ion sequestrant, wherein said inorganic nanoparticles have an average particle size of less than 200 nm and the derivatized nanoparticles have a stability constant greater than 10^{10} with iron (III), said metal-ion sequestering agent is immobilized in said polymeric layer and comprises 0.1 to 50.0% by weight of the polymeric layer, and the polymeric layer contacts the ~~fluid-liquid~~ contained therein and is permeable to water.
2. (Currently Amended) A fluid container according to claim 1 wherein said metal-ion sequestering agent is immobilized on the surface(s) of said container and has a stability constant greater than 10^{10} with iron (III).
3. (Currently Amended) A fluid container according to claim 1 wherein said sequestering agent is immobilized on the surface(s) of said container and has a high-affinity for biologically important metal ions such as Mn, Zn, Cu and Fe.
4. (Currently Amended) A fluid container according to claim 1 wherein said sequestering agent is immobilized on the surface(s) of said container and has a high-selectivity for biologically important metal ions such as Mn, Zn, Cu and Fe.
5. (original) A fluid container according to claim 1 wherein said sequestering agent has a high-selectivity for certain metal ions but a low-affinity for at least one other ion.

6. (original) A fluid container according to claim 5 wherein said certain metal ions comprises Mn, Zn, Cu and Fe and said other at least one ion comprises calcium.
7. (Currently Amended) A fluid container according to claim 1 wherein said metal-ion sequestering agent is immobilized on the surface(s) of said container and has a stability constant greater than 10^{20} with iron (III).
8. (Currently Amended) A fluid container according to claim 1 wherein said metal-ion sequestering agent is immobilized on the surface(s) of said container and has a stability constant greater than 10^{30} with iron (III).
9. (Cancelled)
10. (Cancelled)
11. (Cancelled)
12. (Cancelled)
13. (original) A fluid container according to claim 9 wherein said inorganic nanoparticles have an average particle size of less than 100 nm.
14. (original) A fluid container according to claim 1 wherein said metal-ion sequestrant comprises an alpha amino carboxylate, a hydroxamate, or a catechol functional group.
15. (original) A fluid container according to claim 1 wherein said metal-ion sequestrant comprises a naturally synthesized siderophore molecule.
16. (original) A fluid container according to claim 9 wherein said metal-ion sequestrant is attached to the nanoparticle by reacting the

nanoparticle with a silicon alkoxide intermediate of the sequestrant having the general formula:



wherein x is an integer from 1 to 3;

R is an alkyl group; and

R' is an organic group containing an alpha amino carboxylate, a hydroxamate, or a catechol.

17. (Previously Presented) A fluid container according to claim 1 further comprising a barrier layer wherein the polymeric layer is between the surface of the fluid container and the barrier layer and wherein the barrier layer does not contain the derivatized nanoparticles.
18. (original) A fluid container according to claim 17 wherein the barrier layer is permeable to water.
19. (original) A fluid container according to claim 17 wherein the barrier layer has a thickness in the range of 0.1 microns to 10.0 microns.
20. (original) A fluid container according to claim 17 wherein microbes cannot pass or diffuse through the barrier layer.
21. (original) A fluid container according to claim 1 wherein said container comprises a bottle.
22. (original) A fluid container according to claim 20 wherein said bottle is made of a plastic material.
23. (original) A fluid container according to claim 21 where a cap is provided with said bottle for sealing of said bottle.

24. (original) A fluid container according to claim 1 where said liquid nutrient comprises a beverage.

25. (original) A fluid container according to claim 1 wherein said container is in the form one of the following:

- metal can,
- drink box,
- drink pouch,
- foil wrap,
- glass container,
- plastic container.

26. (original) A fluid container according to claim 1 wherein said sequestering agent is applied to the internal surface of said container.

27. (Cancelled)

28. (original) A fluid container according to claim 1 wherein said container is made of a material that includes said sequestering agent.

29. (original) A fluid container according to claim 23 wherein said sequestering agent is provided on the internal surface of said cap.

30. (Cancelled)

31. (Cancelled)

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- 51. (Cancelled)

52. (Currently Amended) A sealed fluid container for containing a liquid nutrient, said container having an interior surface having a polymeric layer thereon, said polymeric layer having a metal-ion sequestering agent for removing a designated metal ion from said liquid nutrient for maintaining the level of microbes in said liquid nutrient below a predetermined amount, said metal-ion sequestering agent comprises derivatized nanoparticles comprising inorganic nanoparticles having an attached metal-ion sequestrant, wherein said inorganic nanoparticles have an average particle size of less than 200 nm and the derivatized nanoparticles have a stability constant greater than 10^{10} with iron (III), said metal-ion sequestering agent is immobilized in said polymeric layer and comprises 0.1 to 50.0% by weight of the polymeric layer, and the polymeric layer contacts the ~~fluid-liquid~~ contained therein and is permeable to water.

53. (original) A sealed fluid container according to claim 52 wherein said predetermined amount comprises no pathogenous micro-organisms and a level of non harmful micro-organisms similar to the level after pasteurization during the shelf life of the product.

54. (Cancelled)

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